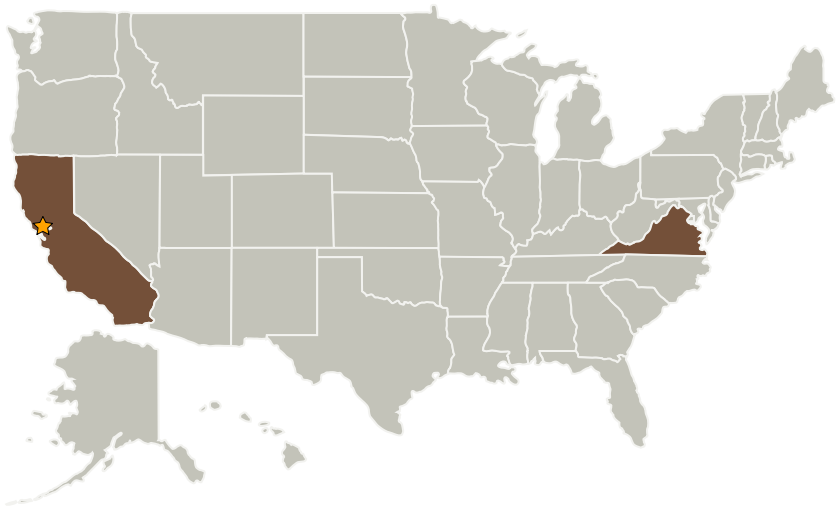
Future Airportal Surveillance and Prediction, Phase I

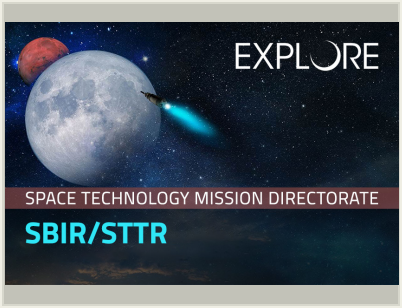
Completed Technology Project (2009 - 2009)

Project Introduction

Recent advances in airport surface surveillance and other sensor, automation, and data sharing technologies now allow the consideration of a significant change in the control paradigm for aircraft and vehicles on the airport surface. Through the use of airport surface surveillance displays, and other computer information systems, it is conceptually possible to provide ATC services without the ATC tower. This Virtual Tower concept has been identified as a primary component of the Joint Planning and Development Office operational concept for the Next Generation Air Transportation System (NextGen). Remote video surveillance of the airfield is likely to play a key role in any such Virtual Tower implementation. However, significant research on computer vision and video surveillance capabilities to support the Virtual Tower concept must first be addressed. These video surveillance capabilities will also provide information to support flight and airport status monitoring. Mosaic ATM proposes to research and develop image processing algorithms to integrate video and airport surface surveillance data to enable NASA researchers to conduct detailed evaluation of fundamental issues associated with the Virtual Tower concept.

Primary U.S. Work Locations and Key Partners





Future Airportal Surveillance and Prediction, Phase I

Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Future Airportal Surveillance and Prediction, Phase I

Completed Technology Project (2009 - 2009)

Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Mosaic ATM, Inc.	Supporting Organization	Industry	Leesburg, Virginia

Primary U.S. Work Locations	
California	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.5 Range Tracking, Surveillance, and Flight Safety Technologies